A?RAMO?ICH, G?NRIKH NAUMOVICH.

Printsipy aerodinamicheskogo rascheta kollektora. Moskva, 1935. 19 p.
(TSAGI. Trudy, no. 231)

Summary in English.

Title tr.: Principles of the aerodynamic design of a wind tunnel nozzle.

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 19?5.

ABRAMOVICH, GENRIKH NAUMOVICH.

Aerodinamika potoka v otkrytoi rabochei chasti aerodinamicheskoi trudy. Chast'll. Rabochaia struia ellipticheskogo secheniia, Moskva, 1935. 16 p., tables. (TSAGI. Trudy, no. 236)

Summary in English.

Title tr.: Aerodynamics of the flow in the open jet of a wind tunnel. Part 11. Open jet of an elliptical section.

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

ABRAMOVICH, Genrikh Naunovich

Teoriia svobodnoi strui i ee prilozheniia. Moskva, 1936. 90 p., illus., tables, diagrs. (TSAGI. Trudy, no. 293) Bibliography: p. 89

Title tr.: The theory of free jet and its application.
QA911.M65 no. 293

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955

ABRAMOVICH, G. N.

"Principles of the aerodynamic calculation of the collector"; published: Trudy TsAGI, No. 321, 1937.
SO: Library of Congress.

ABRAMOVICH, G. N.

"Experimental verification of basic assumptions of the calculation of special castings of centrifugal superchargers and ventilators"; published Trudy TsAGI No. 328, 1937.
SO: Library of Congress

ABRAMOVICH, Genrikh Naumovich

K teorii svobodnoi strui szhimaemogo gaza. Moskva, 1939. [illegible]p., tables, diagrs. (TSAGI. Trudy, no.377) Bibliographical footnotes.

Title tr.: Theory of a free jet of a compressible gas.

SO: Aeronautical sciences and Aviation in the Soviet Union, Library of Congress, 1955.

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000100220004-2"

ABRAMOVICH, G. N.

"Turbulent free jets of fluids and gases"; published Trudy TsAGI, No. 512, 1940.
SO: Library of Congress,

ABRAMOVICH, G. N.

"The Theory of Centrifugal Spray Jets", Sbronik statey (Promishlennaya Aerodinamika), Izd. BNT NKAP, 1944.

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000100220004-2"

ABRAMOVICH, GENRIKH NAUMOVICH.

The theory of a free jet of a compressible gas. Washington, 1944. 82 p., illus., tables, diagrs. (U. S. NACA TM no. 1058)

Includes bibliography.

Trans. of K teorii svobodnoi strui szhimaemogo gaza.

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

ABRAMOVICH, G. N.

"Concerning some characteristics of aerial-jet engines for high velocities of flight"; published TVF, No. 12, pp 18-20, 1946.
SO: Library of Congress.

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000100220004-2"

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

ABRAMOVICH, G.N.

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111. On thermal critical state in a gas flow. ABRAMOVICH, G. N. *C.R. Acad. Sci. URSS*, 84 (No. 7) 375-7 (1946) *In English*.—Gas flows in a cylindrical tube, to a part of which heat is supplied. The gas density is diminished by heating, the velocity increases and the pressure falls. By supplying a suitable amount of heat the velocity may be raised to a critical point, such that further increase in the inflow velocity of the cold gas is impossible. Equations describing the heat flow are given. These determine the ratio of the velocity after heating to the initial velocity, and the drop in pressure. L. S. G.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

ABRAMOVICH, G.N.

19

"Heat Crisis" in Gas Flow. G. N. Abramovitch. *Reports of the Academy of Sciences of U.S.S.R.*, v. 54, no. 7, 1946, p. 579-581. (In Russian.)

The heating of gas flowing through a tube has been investigated mathematically. One of the particular cases discussed is "stationary combustion" in which the section of heated gas stream is replaced by the region of combustion. In this case, the rate of gas flow is said to equal the rate of flame propagation, making the proposed equations valid.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

ABRAMOVICH, G.N.

"Gazovaya dinamika vozdushno-reaktivnykh dvigateley", izd. BNT 1947

ABRAMOVICH, G. N. PA 28T1

USSR/Aeronautics Feb 1947
Jet Engines
Jet Propulsion

"Some Thermodynamic Properties of Noncompressor Jet Engines," Prof G. N. Abramovich, Dr of Technical Sciences, 7 pp

"Tekh Voz Flota" No 2 (227)

The noncompressor jet engine works on the basis of the speed of pressure feed of the air through the intake duct. The author presents graphs and formulas for plotting these graphs with respect to the speed of the pressure feed of the air at the intake duct, and the resulting thrust.

DS 28T1

ABRAMOVICH, G.N.

4850. MECHANICS OF PROPAGATION OF DETONATION AND BURNING. Abramovich, G. N. and Vulis, L. A. (C.R. Acad. Sci. U.R.S.S., 20 Jan. 1947, vol. 55, (2), 107-110; abstr. in Appl. Mech. Rev., Mar. 1948, vol.1, 95). A study is made of the propagation of detonation, assuming that it consists of a normal shock wave followed by a burning wave. With this picture, formulae are derived analogous to Prandtl's well-known shock-wave relation $M_1^* \times M_2^* = 1$ where $M^* = V/a^*$ = fluid velocity divided by the critical velocity. By using the equations of continuity and momentum for the burning wave which follows immediately behind the shock wave and converts the stream M_2^* into stream M_3^*, the authors derive relations which when analysed show that the detonation wave has the well-known characteristic (usually obtained by tedious computations) that there is a minimum permissible velocity at which M_3^* is unity. It is noted that the opposite extreme the detonation-wave velocity is identical with the shock-wave velocity. A formula is derived relating the propagation velocity M_1^* to the thermal characteristics of the mixture O;

A.S.M.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION calibration of the Ubbelohde viscometer: in the case of the Feake instrument, however, water is used as the primary standard. The Russian method for pour point ("setting point") appears to be comparable to that used in Great Britain, being defined as the temperature at which the oil shows no movement during one minute on being examined in a test tube inclined at an angle of 45°, although the determination of the exact figure appears to be a laborious process, as the oil is heated and re-cooling after every inclination of the tube, which is carried out at specified temperature intervals. Corrosive sulphur in lubricating oils is determined by the usual type of copper test, the particular choice of time and temperature in this case being 12 hours and 85°C respectively. An oxidation test for transformer oil is laid down, the governing conditions being a duration of 14 hours at a temperature of 140°C in the presence of both iron and copper catalysts and with air blowing. After such oxidation the oil is examined for sludge, acid value, and saponification value. If it is desired to determine the initial formation of water-soluble acids, this is carried out by a similar test, but at 120°C and for a time of 6 hours. Among the methods included are some which in Great Britain are not usually to be found in a standard work, being more in the

METALLURGICAL LITERATURE CLASSIFICATION

nature of tests carried out in a works control laboratory rather than on [illegible] oils refined by the furfural, nitrobensol, and phenol processes. The inclusion of tests of this type is perhaps due to the fact that whereas in the U.K. and U.S.A. their choice is left to the individual refiner, the standard methods of test being intended more to ensure that buyers' requirements are determined in a uniform manner, the State operation of all industry in the U.S.S.R. has made it desirable that all producers who are units in a single combine should conform to a uniform works control technique. The section on the examination of greases is fairly comprehensive, and in addition to the usual physical tests such as penetration, drop point, etc., includes numerous methods for the chemical examination of greases, e.g., the determination of free fatty acids, soaps, resin. Tests are laid down both for evaluating the protective action of greases in preventing corrosion and also to ensure that the greases themselves are free from corrosive action. In the section dealing with petroleum by-products the traditional Russian interest in sulphonic and naphthenic acids is evinced by the numerous methods for the examination of these materials. Methods are described for the determination of oil, sulphonic acids, and sulphuric acid in "Kontakt," and also for evaluating the fat-hydrolysing activity of this material. Products dealt with in this section include paraffin wax and bitumen: the setting point of paraffin wax (often referred to as "melting point") is taken as the flat protion of the time-temperature cooling curve. The oil content of paraffin was is determined by a mechanical expression method. The tests described for bitumen are those usually given in British and American publications; likewise the description if sampling procedure is conventional.

ABRAMOVICH, GENRIKH NAUMOVICH

ABRAMOVICH, GENRIKH NAUMOVICH

Turbulentnye svobodnye strui zhidkostei i gazov. Moskva, Gosenergoizdat, 1948.

Title tr.: Turbulent free jets of fluids and gases.

NCF

SO: Aeronautical Siences and Aviation in the Soviet Union, Library of Congress. 1955.

ABRAMOVICH, GENRIKH NAUMOVICH.

Prikladnaia gazovaia dinamika. Dopushcheno v kachestve uchebnika dlia vysshikh tekhn. ucheb. zavedenii. Moskva, Gostekhizdat, 1951. 511 p. diagrs.

Title tr.: Applied gas dynamics. Approved as a textbook for schools of advanced technical studies.

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000100220004-2"

ABRAMOVICH, G.N.

PHASE I TREASURE ISLAND BIBLIOGRAPHICAL REPORT AID 318 - I

Call No.: AF803915

BOOK
Author: ABRAMOVICH, G. N.
Full Title: APPLIED GAS DYNAMICS, 2nd ed., revised
Transliterated Title: Prikladnaya gazovaya dinamika

Publishing Data
Originating Agency: None
Publishing House: State Publishing House for Technical and Theoretical Literature
Date: 1953 No. pp.: 736 No. of copies: 10,000

Editorial Staff
Editor: None Tech. Ed.: None
Editor-in-Chief: None Appraiser: None
Others: Some chapters were written by other authors: Zhestkov, B. A. (Ch. VI, Sect. 1-3), Cherkez, A. Ya. (Ch. V, Sect. 6 and Ch. VII, Sect. 3-5), and Ginzburg, S. I. (Ch. IX)

Text Data
Coverage: This book contains basic informations on gas dynamics, applicable to jet engines and other machines and apparatus whose operation is connected with gas movements at high velocity. It is, however, not concerned with direct cal-

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culation of machines. Single valued equations of gas dynamics are mainly used in this book. The recent calculation methods of jet engines, turbines, and compressors are based on these equations. However, in some cases, when it is necessary, double valued equations are used. The author tried to present in a descriptive and easily understandable way the subject. Diagrams, graphs, photos, tables, etc.

It is an up-to-date good textbook.

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Prikladnaya gazovaya dinamika AID 318 - I

Purpose: A textbook for departments of engines of Aviation Institutes, written in conformity with the program approved by the Ministery of Higher Education. It contains materials given by the author in lectures on gas dynamics in the Moskva Aviation Institute im. Ordzhonikidze, S.

Facilities: None

No. of Russian and Slavic References: A considerable number of publications, dated after 1940 mentioned in footnotes

Available: A.I.D., Library of Congress

ABRAMOVICH, G.N. (Moskva).

[redacted]

Thickness of the turbulent displacement region at the boundary of two jets of different speed, temperature, and molecular weight. Izv. AN SSSR, Otd. tekh. nauk no.3:156-158 Mr '57. (MLRA 10:6)
(Jets--Fluid dynamics)

24-6-14/24

AUTHOR: Abramovich, G. N. (Moscow).

TITLE: The turbulent jet in a moving medium. (Turbulentnaya struya v dvizhushcheysya srede).

PERIODICAL: "Izvestiya Akademii Nauk, Otdeleniye Tekhnicheskikh Nauk" (Bulletin of the Ac.Sc., Technical Sciences Section), 1957, No.6, pp.93-101 (U.S.S.R.)

ABSTRACT: A turbulent jet with a straight axis surrounded by a gas flow with different values of velocity, temperature and composition is considered. After a transition length a stable region is reached with constant distribution shapes of velocity, temperature and composition. Equations are set up (5, 6 and 9) whose solution yields formulae expressing the laws of variation of the jet thickness and of the velocity and temperature in it along the axis of the jet. These equations have numerical coefficients which can be derived from experiments such as Zhestkov, B.A. and others (Methods of analysis of the wall temperature in jet and compound cooling. Trudy TsIAM, 1955, No.267). Temperature and composition distributions are related to velocity distribution. The analytical derivations are based on transverse distributions deduced by the author (Free turbulent jets in liquids and gases. Gosenergoizdat, 1948) and shown to conform to experimental data from non-Russian

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The turbulent jet in a moving medium. (Cont.) 24-6-14/24

sources (Figs. 5 and 6). The axial distributions expressed by relations (13) and (14) are compared with experimental data from non-Russian sources in Figs. 7 and 8. An expression is derived for the radius of the mean section and for the length of the transition section.
There are 11 figures, including 9 graphs and 15 references, 5 of which are Slavic.

SUBMITTED: September 5, 1956.

AVAILABLE:

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ABRAMOVICH, G.N.

AUTHOR: Abramovich, G. N. (Moscow) 24-12-2/24

TITLE: Air Flows in the Presence of Reverse Flow Regions. (Techeniye vozdukha pri nalichii oblasti obratnykh tokov).

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1957, No.12, pp.7-14 (USSR)

ABSTRACT: Counter-flow regions arise in gas turbine combustion chambers through swirling devices, flame stabilisers, or transverse airstreams. A representative geometry is the expansion of the main stream over a sharp step. The velocity distribution in the space behind the step, where a circulating flow prevails, is sought. The author refers to earlier work by Abramovich, G.P.("On the Turbulent Mixing at the Boundary of Two Plane Parallel Fluid Streams in Parallel Flow and Counter-Flow". Collected papers edited by Sedov, L.I., Oborongiz, 1956) and himself (Applied Gas Dynamics, Gostekhizdat, 1953) to obtain the relations between the non-dimensional co-ordinates of the circulation zone flow and the non-dimensional undisturbed velocity (Fig.2). In the circulation zone, the first section is ahead of a cross-section of the flow wherein the longitudinal mass flow of the circulating air reaches a maximum value. Experimental results are said to confirm

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the assumption that the velocity of the reverse flow in this cross-section reaches a maximum value. Throughout this cross-section uniform pressure can, therefore, be postulated. Three assumptions are possible. (1) The energy of the direct and reverse flows of the circulation zone is the same. (2) The momentum flows of the two streams are equal. (3) The mean velocities of the two streams are equal. All three hypotheses yield roughly the same result. In the present work the external boundary layer is neglected, it deals in particular with the situation wherein the constant velocity core (potential core) does not extend as far as the first part of the circulation zone. The fact that, at the end of the first part, the energies of the direct and reverse streams as well as their transverse cross sections are nearly equal, makes it possible to consider the reversal of the stream within the second part of the plane parallel circulation zone as a problem soluble by the methods of hydrodynamics of ideal fluids. The idealised problem is formulated and illustrated (Fig.3). The solution is found in terms of a complex potential by the Zhukovskiy method. The analysis is not reproduced but the basic geometric conclusions are given. In particular, the length of the second region of the circulation zone is approximately equal to half the depth of the step. The lines of zero longitudinal velocity, determined numerically, are expressed by an algebraic approximation. The velocity distribution in the diffusor part of the main stream is found. The first cross-section where the main stream occupies the whole width is determined. The pressure, velocity and width of the potential core in this section as well as the width of the mixing zone are plotted as a function of the ratio of the step width to the total width. The results so obtained can be used to plot the velocity distribution in any cross-section further downstream. The analysis of the present paper assumes a uniform flow at the entry to the idealised channel. The dependence of the flow patterns upon the Reynolds number is believed to originate in initial non-uniformity. The second and third regions of the circulation zone are considered and their basic dimensions are stated.

Card 3/3 There are 5 figures and 7 references, all of which are Slavic.

SUBMITTED: September 5, 1956.

AVAILABLE: Library of Congress.

ABRAMOVICH, G. N.

PA - 3082

AUTHOR: ABRAMOVIC, G.N.

TITLE: On the Thickness of the Zone of a Turbulent Mixture on the Boundary of Two Beams of Different Velocity, Temperature, and Molecular Weight. (O tolshchine zony turbulentnogo smesheniya na granitse dvukh struy raznoy skorosti, temperatury i molekuryarnogo vesa, Russian)

PERIODICAL: Izvestiia Akad.Nauk SSSR, Ser.Fiz, 1957, Vol 21, Nr 1, pp 156-158 (U.S.S.R.)

Received: 6 / 1957 Reviewed: 7 / 1957

ABSTRACT: The reason for the consideration that the surface of the tangential velocity fracture is not stable consists of the fact that for large values of the REYNOLDS' number (hence in cases where the restraining action of viscosity is relatively small) any small fluctuation of the fractured surface (which manifests itself in a distortion of the stream lines) leads to the occurrence of pressure reductions on both sides of this surface. These reductions are proportional to the velocity difference. The occurrence of turbulence can also be due to a tangential temperature jump since it leads to different gas density values on both sides of the fractured surface. Therefore the degree of turbulence can be taken to be the ratio of the pulsation of a velocity pressure to its average value. It is shown that it is more convenient to study the influences of the tangential velocity jumps of temperature and of molecular weight on the form of the mixture zone separately. It is also shown that with the mixing of beams of one and the same gas,

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On the Thickness of the Zone of a Turbulent Mixture on the Boundary of Two Beams of Different Velocity, Temperature, and Molecular Weight.

the thickness of the mixing zone is dependent on the ratio of the velocity and on the ratio of the temperature in the beams. With the isothermal mixing of different gases the thickness of the zone depends on the ratio of the velocity and the molecular weight. With the mixing of beams of the same velocity the dependence is on the ratio of temperatures and molecular weights. The breadth of the mixing zone is determined by the maximum level of the turbulence irrespective of the cause of turbulence. (With 3 Citations from Slav Publications).

ASSOCIATION: Not given
PRESENTED BY:
SUBMITTED: 5.10.1956
AVAILABLE: Library of Congress

Card 2/2

Abramovich, Genrikh Naumovich

Angewandte Gasdynamik. Berlin, Technik, 1958.

760 p. illus., diagrs., tables. Translated from the Russian: Prikladnaya gazovaya dinamika, izd. 2, Moscow, 1953.

Bibliographical footnotes.

PHASE I BOOK EXPLOITATION SOV/5290

Soveshchaniye po prikladnoy gazovoy dinamike. Alma-Ata, 1956

Trudy Soveshchaniya po prikladnoy gazovoy dinamike, g. Alma-Ata, 23-26 oktyabrya 1956 g. (Transactions of the Conference on Applied Gas Dynamics, Held in Alma-Ata, 23-26 October 1956) Alma-Ata, Izd-vo AN Kazakhskoy SSR, 1959. 233 p. Errata slip inserted. 900 copies printed.

Sponsoring Agency: Akademiya nauk Kazakhskoy SSR. Kazakhskiy gosudarstvennyy universitet imeni S.M. Kirova.

Editorial Board: Resp. Ed.: L.A. Vulis; V.P. Kashkarov; T.P. Leont'yeva and B.P. Ustimenko. Ed.: V.V. Aleksandriyskiy. Tech. Ed.: Z.P. Rorokina.

PURPOSE: This book is intended for personnel of scientific research institutes and industrial engineers in the field of applied fluid mechanics, and may be of interest to students of advanced courses in the field.

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TABLE OF CONTENTS:

ABRAMOVICH, G. N. (Moscow)

"Turbulent Gaseous and Two-Phase Jets."

report presented at the First All-Union Congress on Theoretical and Applied Mechanics, Moscow, 27 Jan - 3 Feb 1960.

PHASE I BOOK EXPLOITATION SOV/4751

Abramovich, Genrikh Naumovich

Teoriya turbulentnykh struy (Theory of Turbulent Jets) Moscow, Fizmatgiz, 1960. 715 p. 6,000 copies printed.

Ed.: S.O. Apel'baum, Tech. Ed.: N.A. Tumarkina.

PURPOSE: This book is intended for scientists and engineers working in the field of fluid mechanics, jet propulsion, steam and water turbomachines, and pumps. It may also be useful to students of advanced courses of fluid mechanics in schools of higher education.

COVERAGE: The book describes recent research work of the author and his coworkers on the theory of turbulent jets. The contributions of other researchers are also reviewed. The theory of turbulent jets of incompressible fluids is discussed and numerous experimental data on velocity profiles, temperature, concentration of admixtures, and turbulent mixing are given. The author's theory of jets in parallel flow is extended to give consideration to the turbulent wake of bodies. The theory of the turbulent, supersonic jet of gas at high temperature is discussed as is the theory of free turbulence in gas jets. The latter is applicable in principle to any rate of compressibility. It is shown that in the

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consideration of motion and heat transfer in the boundary layer at very high temperatures, the influence of molecular viscosity may prevail over the influence of the turbulent displacement. Attention is also devoted to a discussion of jets in restricted and semirestricted space. Engineering applications of the above theories are given. The following persons cooperated in writing several chapters of the book: O.V. Yakovlevskiy, Ch. VII; V.S. Avduyevskiy, Ch. VIII; I.P. Smirnova, Chs. X and XI, and A.Ya. Cherkez, Section 4 of Ch. XIII. No personalities are mentioned. There are 98 references: 58 Soviet (one translation from German), 23 English, 16 German and 1 Italian.

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E022/E135

AUTHORS: Abramovich, G.N., Makarov, I.S., and Khudenko, B.G.

TITLE: Turbulent Wake Behind Aerodynamically Poor (Blunt) Bodies in a Bounded Stream

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Aviatsionnaya tekhnika, 1961, No. 1, pp. 61-73

TEXT: The theoretical solution of the processes taking place behind the flame stabilisers (intensity of burning of the mixture etc.) could appreciably ease the problem of designing highly efficient combustion chambers. However, the difficulties in obtaining such theoretical solutions are very great, mainly due to the fact that certain elementary processes of combustion are still not fully understood. In particular, the laws governing the flow of gases immediately behind the blunt bodies are still lacking, in spite of the fact that that region affects very strongly the process of combustion as well as the stability of the flame. The present article presents some experimental investigations of the structure of the turbulent wake behind blunt bodies of different form, placed in a bounded stream and causing blockage

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of 14% of the cross-sectional area under the conditions approximating to those in the combustion chamber. The shapes investigated are shown in Fig.1, and the object of the experiments was to determine total pressure, static pressure, and the direction of flow over the whole wake caused by these bodies. The tunnel used for the experiments was of the straight-through type closed working section, and two-dimensional flow was simulated in it. The contraction section was designed according to the method of Witoszynski. The working section dimensions were 0.2 x 0.6 x 2 m. The measurements were taken always at the same station while the model was moved along the wind tunnel. The direction of flow (inclination of the stream lines) was measured by means of a three-tube-in-one probe, the probe inclination being adjusted until the side tubes read the same pressure, the middle top tube being used for a rough estimation of the total pressure at a given point. The exact value of the total pressure was then measured by means of a separate probe

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aligned in the direction of the flow. The static pressure was measured by means of a probe with three holes equally spaced along its periphery. It was found that this type of probe was the most accurate. Pressures were read from the manometers. The drag of a body has a substantial influence on the shape of the wake behind the body. Direct measurement of the drag in an enclosed stream is not easy, and for this reason in the present experiments drag was measured by the Jones method (Refs. 1, 2). The wake boundaries were taken as the lines where the total pressure in the wake was equal to the total pressure in the undisturbed stream. Experimental data were used to evaluate the specific axial component of velocity

$$\bar{u} = \sqrt{\bar{p}_{dyn.}} \cdot \sin \alpha,$$

$\bar{p}_{dyn.}$ being the specific dynamic pressure of the flow (measured dynamic pressure referred to undisturbed flow dynamic pressure). The thickness of the wake was characterised by the transverse

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coordinate $y_{0.5}$, where $\bar{u} = \bar{u}_{0.5} = \dfrac{\bar{u}_{max} + \bar{u}_{min}}{2}$

From the experiments it was found that the characteristics of the wakes behind all the bodies examined were qualitatively similar. The authors distinguish two parts of the wake, the initial and the fundamental. In the initial portion the wake is developing; in the fundamental it remains almost unchanged. The velocity changes within the wake are expressed by a function

$$F = \frac{\bar{u}_{max} - \bar{u}}{\bar{u}_{max} - \bar{u}_m}$$

(in which $\bar{u}_m$ represents the velocity along the central line of the flow), and Figs. 6 and 7 show its distribution for all the bodies investigated. Fig.6 refers to the fundamental portion of the wake, and Fig.7 to the initial portion. It will be seen from these figures that the character of the function F is

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essentially the same for all the bodies, irrespective of the shape of the body and the percentage of blockage of the flow. Thus the authors conclude that this function is the universal function of the wake. Theoretical computations were carried out to evaluate the function F for the case of incompressible fluid. Two different approaches were employed: 1) the "old" theory of Prandtl' (Prandtl'—Schliechting theory) and 2) the "new" theory of Prandtl'. These computational values of F are also shown in Fig.6; the first as a solid line and the second as a dotted line. As can be seen, both the theoretical solutions agree very well with the experimental data. Once the function F is known and the experimental data for $y_{0.1}$ and $y_{0.9}$ are obtained, the thickness of the core $\delta_{я}$, the thickness of the boundary layer δ and the total thickness of the wake $\delta_{сл}$ can be deduced from the old Prandtl' theory (see Ref.3), as follows:

$\delta = 1.569(y_{0.1} - y_{0.9})$; $\delta_{я} = y_{0.9} - 0.136\delta$; $\delta_{сл} = \delta_{я} + \delta$;

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$$y_{0.5} = \delta_1 + 0.4416.$$

(At $\bar{y} = \bar{y}_{0.1}$ there is $F = 0.1$ and at $\bar{y} = \bar{y}_{0.9}$, $F = 0.9$, etc.). In Figs. 6 and 7 F is given as a function of $\eta = y/y_{0.5}$ in the case of the fundamental portion of the wake, and $\eta = (\bar{y} - \bar{y}_{0.9})/(\bar{y}_{0.1} - \bar{y}_{0.9})$ in the case of the initial portion of the wake. Fig.8 shows the experimental values of $\bar{y}_{0.5}$ compared with the theoretical relation $\bar{y}_{0.5} - \bar{\delta}_1 = 0.441\bar{\delta}$ for the plate of different sizes and for the other blunt bodies. It can be seen from the graphs in Fig.8 that in the initial portion of the wake the variation of $\bar{y}_{0.5}$ is of a complex nature and is different for different bodies, being somewhat smoother for the wedge and half-body than for the flat plate. Fig.9 shows the growth of the thickness of the boundary layer in the wake. It can be seen that the boundary layer increases uniformly and has the same character for all the different bodies tested. As the boundary layer grows along the wake, the total thickness of the wake must also grow at

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first. But the difference in static pressure in the potential flow outside the wake and that in the wake forces the flow back towards the central line and therefore the wake begins to narrow irrespective of the fact that the boundary layer grows still further. Eventually the boundary layers formed at the shoulders of the body meet at the centre of the wake and henceforth the motion of the fluid in the wake is governed by entirely new conditions.
There are 9 figures and 5 references: 4 Soviet and 1 German.

ASSOCIATION: Kafedra 201, Moskovskiy aviatsionnyy institut (Department 201, Moscow Aviation Institute)

SUBMITTED: August 8, 1960

Card 7/~~8~~ 7

ABRAMOVICH, G.N. (Moskva)

Mixing of turbulent jets of different density. Izv.AN SSSR.Otd. tekh.nauk.Mekh.i mashinostr. no.3:55-57 My-Je '61. (MIRA 14:6)
(Jets) (Turbulence)

ABRAMOVICH, G.N.

Development of turbulent jets with a nonsymmetric velocity profile. Prom.aerodin. no.24:142-144 '62. (MIRA 16:7)
(Jets--Fluid dynamics)

ABRAMOVICH, G. N.; BAKULEV,V. I.; GOLUBEV, V.A.; SMOLIN, G.G. (Moscow)

"Investigation of turbulent plasma and real gas jets"

report presented at the 2nd All-Union Congress of Theoretical and Applied Mechanics, Moscow, 29 January - 5 February 1964

CHERKEZ, Abram Yakovlevich; ABRAMOVICH, G.N., doktor tekhn. nauk, retsenzent; AKIMOV, V.M., kand. tekhn. nauk, retsenzent; KOTLYAR, Ya.M., kand. tekhn. nauk, nauchn. red.

[Using the method of minor deviations in designing gas-turbine engines] Inzhenernye raschety gazoturbinnykh dvigatelei metodom malykh otklonenii. Moskva, Mashinostroenie, 1965. 354 p. (MIRA 18:12)

ACC NR: AR6019260 SOURCE CODE: UR/0124/66/000/002/B055/B055

AUTHOR: Abramovich, G. N.; Smirnova, I. P.

TITLE: Flow distribution with a non-symmetric velocity profile

SOURCE: Ref. zh. Mekhan, Abs. 2B382

REF SOURCE: Sb. Teoriya i raschet ventilyats. struy. L., 1965, 68-80

TOPIC TAGS: nozzle flow, incompressible fluid, approximation method

TRANSLATION: An approximation method is set forth for the calculation of turbulent current flow of an incompressible liquid through two plane nozzles. It is assumed that such a flow is isobaric and that turbulent friction is zero at points of maximum velocity. In solving the problem, the equations of flow quantity for separate parts of the flow are used; the distribution of velocity from each side of a non-symmetric profile of velocity is assumed to be universal; and the laws for the growth of the thickness of each of the two alternating zones are defined by the relation of the transverse pulsation velocity and the mean longitudinal velocity. As a result, a system of four equations is obtained for determining the four unknowns (the velocities and the three characteristic ordinates near the nozzle sections, two velocities--maximum and minimum---and two ordinates distant from the nozzles). The solution of this system agrees satisfactorily with the data given for the experiment; the authors indicate that agree-

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ACC NR: AR6019260

ment may be improved by the choice of an experimental constant different from that used for symmetrical flooded flows. A. S. Ginevskiy.

SUB CODE: 20

Card 2/2

L 32185-66 EWP(m)/EWT(1)/EWT(m) WW/JW

ACC NR: AP6010859 SOURCE CODE: UR/0421/66/000/001/0154/0158

AUTHOR: Abramovich, G. N. (Moscow); Bakulev, V. I. (Moscow); Makarov, I. S. (Moscow); Khudenko, B. G. (Moscow)

75
B

ORG: none

TITLE: Investigation of a submerged turbulent stream of real gas

SOURCE: AN SSSR. Izvestiya. Mekhanika zhidkosti i gaza, no. 1, 1966, 154-158

TOPIC TAGS: axisymmetric flow, turbulent flow, real gas, gaseous substance, Prandtl number, nitrogen, LIQUID NITROGEN, CRITICAL PRESSURE

ABSTRACT: The results of the experimental investigation of the axisymmetric flow of liquid nitrogen at supercritical pressure in gaseous nitrogen are presented. The observation of the flow with ordinary and shadowgraph cameras indicates that the liquid flow is distinguished by the absence of droplets at the boundary layer, due to vanishing surface tension at supercritical pressure. The conditions of the experiment and the apparatus used are described (the Reynolds number at the exit nozzle was in the range of 1.7 to $5.8 \cdot 10^5$). The kinetic pressure and temperature profiles were measured at upper and mid-stream sections of the flow and the data are compared with the theoretical computations. The Prandtl turbulence number was so chosen that a phenomenological constant employed in the comparison of the results was about the same for the

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L 32185-66

ACC NR: AP6010859

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kinetic and thermal profiles. It was found that under these conditions two density regimes were formed in the stream and the relative width of the cold nitrogen stream is smaller than the isothermal stream. Orig. art. has: 6 figures.

SUB CODE: 20/ SUBM DATE: 10Mar65/ ORIG REF: 003

LC.

Card 2/2

SAKHANOVICH, Vladimir Yevstaf'yevich; BEREZKIN, P.N., dotsent, red.; ABRAMOVICH, G.O., red.; VYGOLOVA, M.A., tekhn.red.

[Correcting defects in steel castings by welding] Ispravlenie defektov stal'nogo lit'ia zavarkoi; iz opyta ChTZ. Pod red. P.N.Berezkina. Cheliabinsk, Cheliabinskoe knizhnoe izd-vo, 1958. 78 p. (MIRA 13:7)
(Steel castings--Defects) (Steel castings--Welding)

LYAKHOVICH, Lev Stepanovich; KOMISSAROV, Abram Izrailevich; ABRAMOVICH, G.O., red.; KOLBICHEV, V.I., tekhn.red.

[Principles of the technology of heat treatment of rolled shapes] Osnovy tekhnologii termicheskoi obrabotki sortovogo prokata. Cheliabinsk, Cheliabinskoe knizhnoe izd-vo, 1959. 90 p. (MIRA 13:2)
(Rolling (Metalwork)) (Steel--Heat treatment)

SYSOYEV, Aleksandr Dmitriyevich; ABRAMOVICH, G.O., red.; KOLBICHEV, V.I., tekhn.red.

[Studies on the physical geography of Chelyabinsk Province] Ocherki fizicheskoi geografii Cheliabinskoi oblasti. Cheliabinsk, Cheliabinskoe knizhnoe izd-vo, 1959. 205 p. (MIRA 13:2)

(Chelyabinsk Province—Physical geography)

ZAKHAROV, Mikhail Dmitriyevich; ABRAMOVICH, G.O., red.; KOLBICHEV, V.I., tekhn.red.

[Chelyabinsk in the seven-year plan] Cheliabinsk v semiletke. Izd.dop. i perer. Cheliabinsk, Cheliabinskoe knizhnoe izd-vo, 1960. 83 p. (MIRA 13:9)
(Chelyabinsk--Economic policy)

SEREDKIN, Ivan Andreyevich; ABRAMOVICH, G.O., red.; BAGINA, V.Ya., tekhn.red.

[Health resorts of Chelyabinsk Province] Kurorty Cheliabinskoi oblasti. Cheliabinsk, Cheliabinskoe knizhnoe izd-vo, 1960. 91 p. (MIRA 14:4)

(CHELYABINSK PROVINCE--HEALTH RESORTS, WATERING PLACES, ETC.)

ZEMEROV, Nikolay Iosifovich; ABRAMOVICH, G.O., red.; KOLBICHEV, V.I., tekhn. red.

[Development of telecommunications in Chelyabinsk Province in the seven year plan]Razvitie sviazi Cheliabinskoi oblasti v semiletke. Cheliabinsk, Cheliabinskoe knizhnoe izd-vo, 1960. 21 p. (MIRA 15:12)

(Chelyabinsk Province—Telecommunication)

ABRAMOVICH, G.O., red.; KOLBICHEV, V.I., tekhn. red.

[Toward new frontiers] K novym rubezham. Cheliabinsk, Cheliabinskee knizhnoe izd-vo, 1961. 112 p. (MIRA 17:4)

KUKLIN, Modest Mikhaylovich; ABRAMOVICH, G.O., red.; KOLBICHEV, V.I., tekhn. red.

[Second sky; Chelyabinsk planetarium] Vtoroe nebo; Cheliabinskii planetarii. Cheliabinsk, Cheliabinskoe knizhnoe izd-vo 1960. 19 p. (MIRA 17:4)

ABRAMOVICH, G.P.

POLYAKOV, B.A., inzhener; ABRAMOVICH, G.P., inzhener; KAYALOV, G.M., dotsent, kandidat tekhnicheskikh nauk.

Remarks on B.A.Teleshev's article "Necessity of rendering the terminology in problems of reactive capacity measurements more precise." Elektrichestvo no.1:79-81 Ja '54. (MLRA 7:2)

1. Kavelektromontazh (for Polyakov). 2. Khar'kovskiy institut inzhenerov zheleznodorozhnogo transporta (for Abramovich). 3. Novocherkasskiy politekhnicheskiy institut (for Kayalov). (Teleshev, V.A.) (Electric engineering--Terminology)

ABRAMOVICH, G. P.

AID P - 1610

Subject : USSR/Electricity

Card 1/1 Pub. 27 - 19/27

Author : Abramovich, G. P., Eng.

Title : The field as an aspect of matter (Discussion of the article by O. B. Bron, Elektrichestvo, No.7, 1954 and No.2, 1955)

Periodical : Elektrichestvo, 3, 77-78, Mr 1955

Abstract : The author points out inaccuracies of O. B. Bron's article, some of which consist, according to the author, in a confusion of the wave and of the particle theories.

Institution: Belorussian Institute of Engineers of Railroad Transportation

Submitted : No date

ABRAMOVICH, G. P.

USSR/Electricity - Systems of Units FD-2296

Card 1/1 Pub 90-9/12

Author : Abramovich, G. P.

Title : A Universal System of Units

Periodical : Radiotekhnika 10, 72-73, Jan 1955

Abstract : I. G. Klyatskin proposed (in "Electromagnatic system of units," ibid No 1, 1954; "Problem of a unique system of units in electrodynamics," ibid. No 7, 1954) a system of units called by him "universal" or "unique", which is a modification of the MKSA system in the sense that the dielectric (epsilon) and magnetic permeability (mu) constants of vacuum are eliminated; namely, he proposed a new system to combine the advantages of the absolute practical system and the CGS system. In the present note the author discusses the arguments presented in favor of the new system in order to evaluate the proposal. He concludes that I. G. Klyatskin's so-called "universal system" on the whole seems to be a big step backwards toward mechanism and the CGS system rather than a step forward toward a more accurate representation of the physical side of phenomena.

Institution: --

Submitted : --

24(3)

AUTHOR: Abramovich, G. P., Engineer (Gomel') SOV/105-59-6-5/28

TITLE: On the Necessity of a Better Representation of the Advantages of the MKSA System of Units (O neobkhodimosti boleye otchetlivogo vyrazheniya preimushchestv sistemy yedinits MKSA)

PERIODICAL: Elektrichestvo, 1959, Nr 6, pp 22-23 (USSR)

ABSTRACT: The standard MKSA system of units, which has been officially introduced in the Soviet Union on January 1, 1957 possesses many advantages and has found widespread application. Notwithstanding this circumstance, recent critical comments are found in literature concerning this system of units, as well as propositions of new systems. As is shown in the comment by L. B. Slepyan, these critical comments can be ascribed to the fact that the advantages of this system are not known to everybody, which circumstance gives rise to misunderstandings. Statements are found, for example, in which it is maintained that the accuracy of the MKSA system is unsatisfactory for reasons of principle, because the magnetic permeability of empty space is a fixed constant quantity, viz $\mu_0 = 4\pi \cdot 10^{-7}$ gn/m An analysis of this question of unit systems shows that any fortuitous system of units is finally based upon experience:

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On the Necessity of a Better Representation of the/Advantages of the MKSA System of Units SOV/105-59-6-5/28

upon the laws of charge interaction and current interaction. If the system of units is constructed on the basis of Maxwell's equations this does not alter the situation fundamentally, as even the equations of the electromagnetic field are an analytical generalization of the fundamental laws. In analogy to chemical usage a system obtained from the relationships between the units, which are determined from the fundamental equations, is termed a stoichiometrical one. In contradistinction a system, into which a certain number of additional constants have been introduced, is termed a corrected one. The MKSA system of units is a corrected one. This correction renders it more "practical" and easier to operate; by no means, however, does it lead to an alteration of the fundamental nature of the system. A principal feature of the MKSA system of units is that it comprises four units. Hence follows the existence of definitely given quantities of the dielectric constant and the magnetic permeability in empty space. There are 2 Soviet references.

SUBMITTED: November 17, 1958

Card 2/2

ABRAMOVICH, G.P., inzh. (Gomel'); SENA, L.A., prof., doktor fiziko-matematicheskikh nauk (Leningrad)

Necessity of expressing the advantages of the MKSA more clearly. Comparative advantages of different unit system. Elektrichestvo no.3:88-89 Mr '60. (MIRA 13:6)
(Electric units)

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000100220004-2"

YANKO-TRINITSKIY, A.A., doktor tekhn.nauk, prof.; ABRAMOVICH, G.P., inzh. (Gomel'); NEDELKU, V., kand.tekhn.nauk, dotsent; KARPOV, G.V.; VERETENNIKOV, L.P., kand.tekhn.nauk, dotsent (Leningrad); VILESOV, D.V., kand.tekhn.nauk, dotsent (Leningrad); ALYAB'YEV, M.I., doktor tekhn.nauk, prof. (Leningrad)

Equations and fundamental relationships in the theory of synchronous machines. Elektrichestvo no.7:81-85 Jl '62. (MIRA 15:7)

1. Ural'skiy politekhnicheskiy institut imeni Kirova (for Yanko-Trinitskiy). 2. Bukharestskiy politekhnicheskiy institut, Rumyniya (for Nedelku). 3. Institut elektromekhaniki (for Karpov).
(Electric machinery, Synchronous)

ABRAMOVICH, G.F., inzh.

Generalization of a formula on the e.m.f. of single-armature converters. Vest. elektroprom. 33 no.3:75 Mr '62. (MIRA 15:3)
(Electric current converters)

ABRAMOVICH, G.P.

Evaluation of the readings of an electric measuring device.
Izm. tekh. no.12:37-38 D '63. (MIRA 16:12)

KHARAGORGIYEV, S.I. [Kharahorbiiev, S.I.]; ABRAMOVICH, G.R. [Abramovych, H.R.], inzh.

On the new technological basis. Nauka i zhyttia 10 no.3:18-20 Mr '60. (MIRA 14:8)

1. Glavnyy inzhener Gosudarstvennogo instituta po proyektirovaniyu stankostroitel'nykh predpriyatiy ("Ukrdiproverstat") (for Kharagorgiyev). 2. Glavnyy spetsialist Gosudarstvennogo instituta po proyektirovaniyu stankostroitel'nykh predpriyatiy (for Abramovich).

(Ukraine--Machinery industry) (Automation)

LOS', L.I., professor; ABRAMOVICH, G.S., kandidat biologicheskikh nauk; BELOVA, R.S., ~~kandidat biologicheskikh~~ nauk; RASSOLOVA, V.P., kandidat biologicheskikh nauk

Sanitary protection of the future Stalingrad Reservoir. Gig. i san. 21 no.10:11-14 O '56. (MLRA 9:11)

1. Iz Saratovskogo oblastnogo nauchno-issledovatel'skogo sanitarno-gigiyenicheskogo instituta
(WATER SUPPLY
water reservoir, sanitary protection)

ABRAMOVICH, I.

Finincing the agriculture of Azerbaijan. Fin. SSSR 20 no.1:39-42
Ja '59. (MIRA 12:2)

1. Nachal'nik otdela finansirovaniya sel'skogo khozyaystva Ministerstva finansov Azerb. SSR.
(Azerbaijan--Agriculture--Finance)

ABRAMOVICH, I.

Reduce state farm production costs. Fin.SSSR. 20 no.11:35-38
N '59. (MIRA 12:12)

1. Nachal'nik otdela Ministerstva finansov AzerSSR.
(Azerbaijan--State farms--Costs)

ABRAMOVICH, I., prof. (Gdan'sk)

Filatov's tissue therapy in Poland. Oft.zhur. 13 no.8:471-473 '58. (MIRA 12:2)

(POLAND--TISSUE EXTRACTS)

ABRAMOVICH, I.A., inzhener.

Attachment for hot straightening of knife sections. Sel'khozmashina no.2:30 F '54. (MLRA 7:2)

(Mowing machines)

ABRAMOVICH, I.A.

Name: ABRAMOVICH, I. A.

Dissertation: The time factor in treating malignant tumors with X rays; an experimental investigation

Degree: Cand Med Sci

Defended at: ~~Affiliation~~: Odessa State Med Inst imeni N. I. Pirogov

Publication ~~Defense Date~~, Place: 1956, Odessa

Source: Knizhnaya Letopis', No 4, 1957

ABRAMOVICH, A.D.; ABRAMOVICH, I.A.

Automatic control of small boiler systems in England. Prom. energ. 15 no.10:46-48 O '60. (MIRA 13:11)

(Great Britain--Boilers)

(Great Britain--Automatic control)

ABRAMOVICH, A.D., kand.tekhn.nauk; ABRAMOVICH, I.A., inzh.

Analysis of steam power plants on the basis of the capacity balance. Teploenergetika 7 no. 12:77-81 D '60. (MIRA 14:1)
(Steam power plants)

ABRAMOVICH, I.A., inzh.

Computers for automating units at the power plant of Huntington Beach. Teploenergetika 8 no.6:83-86 Je '61. (MIRA 14:10)
(Huntington Beach--Electric power plants)

ABRAMOVICH, I.A., inzh.

Chromium extraction from the waste waters of leather factories.
Izv.vys.ucheb.zav.; tekh.leg.prom. no.3:36-41 '61. (MIRA 14:7)

1. Berdichevskiy Gosudarstvennyy kozhevennyy zavod imeni Il'icha.
Rekomendovana kafedroy tekhnologii iskusstvennogo volokna
Kiyevskogo tekhnologicheskogo instituta legkoy promyshlennosti.
(Sewage—Purification) (Leather industry)

ABRAMOVICH, I.A., inzh.

Effect of preeration on the purification of sewage waters in leather plants. Izv.vys.ucheb.zav.; tekh.leg.prom. no.1:66-75 '62. (MIRA 15:2)

1. Berdichevskiy gosudarstvennyy kozhevennyy zavod imeni Il'icha. Rekomendovana kafedroy tekhnologii kozhi Kiyevskogo tekhnologicheskogo instituta legkoy promyshlennosti.
(Sewage--Purification)

ABRAMOVICH, Il'ya Aleksandrovich. Prinimal uchastiye IVANOV, G.I., inzh.; KUCHER, P.Ye., inzh., retsenzent; PLEMYANNIKOV, M.N., red.; VINOGRADOVA, G.A., tekhn. red.

[Purification of sewage waters of leather factories] Ochistka stochnykh vod kozhevennykh zavodov. Moskva, Gizlegprom, 1963. 236 p. (MIRA 16:9)
(Leather industry) (Industrial wastes--Purification)

KERBALIYEV, A.I.; RYSS, D.S.; LISHNEVETSKIY, S.P.; ABRAMOVICH, I.A.

Automatic control of multiple pumping stations. Mash. i neft. obor. no.9:17-20 '64. (MIRA 17:11)

1. Nauchno-issledovatel'skiy i proyektnyy institut po kompleksnoy avtomatizatsii proizvodstvennykh protsessov v neftyanoy i khimicheskoy promyshlennosti, Sumgait.

KERBALIYEV, A.I.; RYSS, D.S.; ABRAMOVICH, I.A.

Monitoring water injection under remote control of interconnected pumping stations. Mash. i neft. obor. no.4:15-17 '65. (MIRA 18:5)

ABRAMOVICH, I.A., inzh.

Device for the local heating of welded girth joints. Svar.proizv. no.11:39-40 N '64. (MIRA 18:2)

1. Barnaul'skiy kotel'nyy zavod.

ABRAMOVICH, I.A., inzh. (Khar'kov)

New design for an aeration tank. Vod. i san. tekh. no.3:4-5 '64
(MIRA 18:4)

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000100220004-2"

KUKHTIKOVA, T.I.; FRANTSUZOVA, V.I.; YEFERINA, G.P.; ABRAMOVICH, I.B.; PAVLOVA, G.I.

Prevailing periods of surface waves. Dokl. AN Tadzh. SSR 6 no.3:17-21 '63. (MIRA 17:4)

1. Institut seysmostoykogo stroitel'stva i seysmologii AN Tadzhikskoy SSR. Predstavleno chlenom-korrespondentom AN Tadzhikskoy SSR R.B.Baratovym.

L 37762-66 EWT(d)/EWT(m)/EWP(c)/EWP(v)/T/EWP(t)/ETI/EWP(k)/EWP(l) IJP(c)
ACC NR: AP6028845 JD/HM SOURCE CODE: UR/0125/66/000/003/0076/0077

AUTHOR: Abramovich, I. A.; Kurochkin, A. N.

ORG: none

50
B

TITLE: Tubular defects in electroslag welding

SOURCE: Avtomaticheskaya svarka, no. 3, 1966, 76-77

TOPIC TAGS: electroslag welding, weld defect, flaw detection, molten metal, sheet metal, steel/09G2S steel

ABSTRACT: Small tubular defects were observed at the Barnaul Boiler Plant in vessels made by electroslag welding from 09G2S steel with walls 110 and 155 mm thick. Ultrasonic flaw detection revealed tubes 10-500 mm long and 1-10 mm in diameter with oval cross sections lying in the weld joint at a depth of approximately 1/3-2/3 the thickness of the metal. Careful observation showed that in all cases, without exception, where ultrasonic detection showed a tubular flaw in the molten metal, there was defects in the base metal which impeded ultrasonic flaw detection in the weld joint due to interference. This indicated that the formation of tubular defects in a joint welded by the electroslag method is associated with the quality of the initial metal. It was decided to study the sheets used in making the vessels in parallel with the study of the tubular defects. Photographs con-

Card 1/2 UDC: 621.791.756:620.19

ACC NR: AP6028845

firmed the conclusion that the tubular defects are formed at the edges of the stratified base metal. It was therefore decided to use the ultrasonic method for sorting out the sheets. Sheets with defects exceeding GOST standards were rejected, and the remaining sheets were put into production. No tubular defects were detected in vessels welded from these sheets. Orig. art. has: 4 figures. [JPRS: 36,171]

SUB CODE: 13, 11 / SUBM DATE: none

LS
Card 2/2

3(8)

AUTHOR: Abramovich, I. I. SOV/7-59-4-7/9

TITLE: Uranium and Thorium in Intrusive Rocks of the Central and Western Tuva (Uran i toriy v intruzivnykh porodakh Tsentral'noy i Zapadnoy Tuvy)

PERIODICAL: Geokhimiya, 1959, Nr 4, pp 358 - 363 (USSR)

ABSTRACT: 60 intrusive massives of the region mentioned were investigated. It was found in general that the granitoids of th area show low or medium radioactivity, the ratio of thorium and uranium is near clarkeite or somewhat above (Table). In the course of the evolution of the intrusive magmatic process the radio elements exhibit cyclic behavior which corresponds with the cycle of the magmatic process (Fig 3). Younger intrusions show a decreased Th/U-ratio. On comparison with the radiochemical type classification of L. V. Komlev (Ref 7) the following results: (Fig 4). The Tannuol'skiy complex corresponds with type 5 but has a somewhat higher Th/U-ratio. The Chingekatskiy complex has a somewhat lower Th/U-ratio compared with type 2. The granites of the Khovaksinskiy complex correspond least with the radioactive varieties of the granitoids of

Card 1/2

Uranium and Thorium in Intrusive Rocks of the Central SOV/7-59-4-7/9
and Western Tuva

type 5. The Torgalykskiy complex has an intermediary position between the granites of type 1, 2, and 5. The granites of the Syutkhol'skiy complex mainly belong to type 1, but the most radioactive massives are among type 5. The Yustydinskiy complex belongs completely to type 5. There are 4 figures, 1 table, and 12 references, 9 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut, Leningrad (All-Union Scientific Research Institute of Geology, Leningrad)

SUBMITTED: December 16, 1958

Card 2/2

ABRAMOVICH, I.I.

Rare alkalies in Tuva granitoids. Zap. Vses. min. ob-va 89 no.5: 577-582 '60. (MIRA 13:10)
(Tuva Autonomous Province--Alkalies)

ABRAMOVICH, I.I.; DOROFEYEVA, E.F.

Admixture-elements in intrusive rocks of central and western Tuva. Inform.sbor. VSEGEI no.22:55-58 '59. (MIRA 14:12)
(Tuva Autonomous Province--Trace elements)

ABRAMOVICH, I.I.

Devonian igneous activity of Tuva in the light of geochemical data. Inform.sbor.VSEGEI no.53:117-125 '62. (MIRA 17:1)

I.I. ABRAMOVICH, Ye. B. VYSOKOOSTROVSKAYA (USSR)

"Titanium in magmatic formations of the Altai-Sayan folded area."

Report presented at the Conference on Chemistry of the Earth's Crust, Moscow, 14-19 Mar 63.

ABRAMOVICH, I.I.; VYSOKOOSTROVSKAYA, Ye.B.; DOROFEYEVA, E.F.

Manganese in igneous rocks in the Altai-Sayan fold area. Geokhimia no.7:647-651 Jl '63. (MIRA 16:9)

1. All-Union Geological Institute of Scientific Research, Leningrad.

(Altai Mountains--Manganese) (Sayan Mountains--Manganese)

ABRAMOVICH, I.I.; SMYSLOV, A.A.

Some problems of radiogeophysics in connection with metallogenetic investigations. Trudy VSEGEI 95:4-11 '63.

(MIRA 17:11)